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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/214,840 01/10/92 HAMMER

K 051009/0114

EXAMINER

IMS2/1009

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NON-S

ART UNIT

PAPER NUMBER

1772

DATE MAILED:

10/09/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Applicant No.

09/214,840

Applicant(s)

HAMMER ET AL.

Examiner

Sow-Fun Hon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

***Rejections Withdrawn***

1. The 35 U.S.C. 101 and 103(a) rejections in Paper # 7, paragraphs 6, 8 (mailed 02/26/01) of claim 12 have been withdrawn due to Applicant's cancellation of said claim in Paper # 9 (filed 07/26/01).
2. The 35 U.S.C. 102(e) rejection in Paper # 7, paragraph 8 (mailed 02/26/01) of claims 6-10 as being anticipated by Hammer et al. (US 5,736,179) has been withdrawn due to Applicant's clarification in Paper # 9 (filed 07/26/01).

***Rejections Repeated***

3. The 35 U.S.C. 103(a) rejection of claims 1-11 over Miller et al. in view of Hammer et al. (US 5,736,179) has been repeated for the same reasons previously of record in Paper # 7, paragraph 8 (mailed 02/26/01).

***New Rejections***

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2,4,5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 2 recites the broad recitation "pH in the range from 4.0 to 7.5", and the claim also recites "preferably from 4.5 to 7.0" which is the narrower statement of the range/limitation; claim 4 recites the broad recitations "temperature of 50 to 68 °C" and "20 seconds to 40 minutes", and the claim also recites "preferably up to 60 °C" and "preferably 2 to 20 minutes" which are the narrower statements of the range/limitation; claim 5 recites the broad recitation "content of 0.2 to 20% by weight", and the claim also recites "preferably 0.5 to 5 % by weight" which is the narrower statement of the range/limitation.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (US 4,388,331) in view of Hammer et al.(US 5,736,179).

Both references have been discussed in Paper # 7, paragraph 8 (mailed 02/26/01) and are rediscussed here for Applicant's convenience.

Miller has a method to produce an improved collagen sausage casing by introducing a proteolytic enzyme to the collagen gel whereby the enzyme is immobilized and becomes non-functioning as the free water that is required for its activities is restricted by the further steps of the process (abstract). Miller teaches that the enzyme is rendered non-functioning within 25 to 30 minutes, wherein the degree of degradation is insufficient to cause a significant reduction in the tensile strength of the casing (column 4, lines 1-11). Miller teaches that when the sausage is smoked or cooked, the enzyme is reactivated to tenderize the casing (column 2, lines 1-10) but is then denatured due to the rise in temperature, limiting the degradation and hence the tenderization of the casing. Miller teaches that the term "non-functioning" means that the enzyme is inactivated but not destroyed and may be reactivated by placing the casing into the proper environment for the enzyme to function (column 2, lines 24-30). Miller teaches that the enzymes may be rendered non-functioning by a variety of different mechanisms depending on the particular enzyme employed. A specific example given is the use of a shift in pH to inactivate (column 3, lines 43-46). The concentration of the enzyme in the casing gel is taught to be between 0.001 and 0.5 % based on the collagen solids (column 3, lines 13-21). Miller fails to

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teach the claimed cellulose casing with hemp fiber reinforcement and the corresponding cellulase enzyme.

Hammer et al. have a tubular foodstuff casing based on cellulose hydrate which preferably contains a fiber reinforcement in its wall, for example consisting of paper made of hemp fibers. These sausage casings called fibrous skin are used in particular for high-diameter sausages (column 3, lines 38-45). Hammer et al. teach the use of a fungicidal compound to *indirectly* prevent cellulose degradation by cellulolytic enzymes (cellulase) since it prevents the growth of molds which produce the enzymes (column 5, lines 35-40). Hammer et al. merely disclose that the fibrous cellulose sausage casings are degraded by the corresponding cellulase enzyme.

Because Hammer et al. teach that fiber-reinforced hydrated cellulose sausage casings are well-known in the art, and that they are degraded by the corresponding cellulolytic enzyme which is cellulase, it would have been obvious to one of ordinary skill in the art to have used the teachings of Hammer et al. to extend the method of Miller to obtain a method of tenderizing fibrous hydrated cellulose sausage casings instead of collagen casings.

### ***Response to Arguments***

8. Applicant's arguments in Paper # 9 (filed 07/26/01) with respect to the combination of Miller in view of Hammer et al. have been fully considered but they are not persuasive.

Applicant argues that the suggested combination would result in a cellulosic casing having incorporated therein inactivated cellulytic enzymes which subsequently can be reactivated and thus can be used to tenderize the casing, which does not result in the present

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invention, and that furthermore the viscose solution used for the preparation is alkaline and would permanently denature any enzymes mixed into it. Applicant is respectfully reminded that the pH range in which cellulase is active in would dictate when it is applied to the casing to tenderize/degrade it.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

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10/03/07

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER

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10/5/07